

## Accelerated the roll-out of 5G in Europe

Following our first deployment in Romania at the end of 2019, we launched 5G in Poland, Spain, Luxembourg and France in 2020.

# 5G

supplements our existing networks, enabling us to cater for a growing number of uses and develop new services for society as a whole through carefully planned deployment. Delivering average speeds three to four times faster than 4G networks, 5G offers users better connection quality on the go, both in urban areas (where 4G is widely used) and other economic hubs. From 2023, when our core networks have transitioned to 5G, we will be able to reduce transfer delay and dedicate certain network slices to critical uses and specific needs such as security, health and Industry 4.0.

### New uses for businesses and the general public

→ A real game changer for businesses, 5G transforms business models and improves processes in a number of

sectors, bringing about progress in a great many areas, including wireless smart factories, predictive maintenance, telemedicine, remote monitoring, real-time traffic management and smart vehicles. We have already tested out different use cases (see following pages) with our partners. Furthermore, we encourage innovation by creating opportunities for start-ups, SMEs and local authorities to test out their products and services and receive support from our experts. For instance, Orange Poland signed an agreement with the Łódź Special Economic Zone (ŁSSE) to deploy an indoor 5G/LTE (Long Term Evolution) network. In Romania, five start-ups chosen as part of the 5G Online Challenge were given access to Orange's 5G Labs, programming interfaces, platforms and equipment to optimize their solutions. The general public can also use 5G to learn, work, communicate, make their lives easier and entertain themselves by accessing more immersive virtual, augmented and mixed reality experiences. Different products and services are currently being tested by Orange's retail customer base. For example, the entertainment industry will enable people to access the latest content on the move.

### 5G, supporting the environmental transition

→ By 2025, when all its features have been deployed, 5G will be 10 times more energy efficient than 4G per unit of data carried. Unlike previous generations, 5G integrates energy consumption optimization by design. For instance, 5G base stations are activated only when needed, serve more users at once and are designed to save energy by going into sleep mode when the traffic load is low.

In addition, 5G will help businesses and regions respond to environmental challenges by making industrial processes more seamless, making information accessible and usable to synchronize supply and demand as accurately as possible, as well as preventing excessive use of energy and materials. Providing the information communicated by sensors in real time will help optimize energy and resource use in many sectors, including electricity (smart grid), construction, transport, logistics and agriculture. Expanding remote collaboration and immersive virtual events will help minimize the number of journeys, while implementing traffic control systems will reduce congestion and pollution.

# 5

of our eight operating countries in Europe have launched 5G offers.

# 90 MHz

the broadest range of 5G frequencies won by an operator in France in October 2020. Over 160 areas—including Nice, Marseille, Le Mans, Angers and Clermont-Ferrand—were covered by Orange's network at the end of 2020 and Paris will be added to the list in March 2021.

# 121

urban areas in Spain had access to the 5G network at the end of 2020, following its launch in Madrid, Barcelona, Valencia, Seville and Malaga in September. In 2021, the network is expected to cover over 50% of the population.

# Full

5G coverage in Bucharest, Romania.

## Threefold increase

in 5G traffic in the city of Luxembourg between the launch in late November 2020 and early March 2021.

# 400

urban areas in Poland deliver 5G services to over 6 million customers.

# 36

Orange-branded devices are 5G compatible.